AMENDMENTS TO THE CLAIMS:

Complete Listing of Claims

Claims 1-10 (canceled)

Claim ~~11~~. (currently amended) An apparatus for transceiving a data signal compliant with HomePNA 10M8 technology in an Open System Interconnect network, said apparatus comprising:

a transmitter having an input for coupling to a media access control device for receiving a data signal to be transmitted and operably configured to convert said data signal to an encoded signal, said transmitter further operably configured to filter and digitally modulate said encoded signal compliant with HomePNA mask requirements and output said filtered and digitally modulated signal to a first analog front-end device for transmission to a shared medium;

a receiver having an input for coupling to a second analog front-end device for receiving a HomePNA data signal from said shared medium and operably configured to digitally demodulate, filter and decode a pay-load portion of said HomePNA data signal;

wherein said second analog front-end device having an input for coupling to said shared medium and operably configured to sample and filter said HomePNA data signal, and having an output for coupling to said receiver for outputting a pass-band signal responsive to said received HomePNA data signa;

wherein said receiver further includes

a digital demodulator having an input for receiving said pass-band signal and operably configured to down-convert said pass-band signal to a base-band signal,

a raised-cosine filter having an input for coupling to an output of said digital demodulator for receiving said base-band signal, and operably configured to filter down-converted noise from said base-band signal, and

~~The apparatus of Claim 10, wherein said receiver further includes~~

an equalizer having an input for receiving said filtered base-band signal from an output of said real, low-pass filter and operably configured to reduce inter-symbol interference, said equalizer operates at a first and second rate, wherein said operating rate is defined in preamble portion of said HomePNA data signal.

Claim ~~12~~ 2. (original) The apparatus of Claim 11, wherein said equalizer is operably configured to trained reception for a payload portion of said HomePNA data signal.

Claim ~~13~~ 3. (currently amended) A method of transceiving a data signal in a HomePNA 10M8 compliant Open System Interconnect network, said method ~~apparatus~~ comprising the steps of:

in a transmitter path:

receiving a data bit stream for transmission from an associated media access controller (MAC);

encoding said data bit stream into a symbol signal based on said data bit stream at a first or second symbol rate, wherein said symbol rate is defined in a preamble portion of said data bit stream;

filtering said symbol signal to a resultant first base-band signal;

digitally modulating said base-band signal to a resultant first pass-band signal centered at approximately 7 MHz;

filtering a notch into said first pass-band signal centered at approximately 7 MHz; and

sending said first pass-band signal centered and notched at approximately 7 MHz to an analog front end device for transmission to a shared medium; and

in a receiver path:

receiving a HomePNA data signal from said shared medium;

sampling and filtering said HomePNA data signal to a second pass-band signal responsive to said received HomePNA data signal;

digitally demodulating said second pass-band signal to a down-converted second base-band signal responsive to said received second pass-band signal;

filtering said second base-band signal using a low-pass filtering arrangement, wherein down-converted noise is separated from said second base-band signal;

canceling channel inter-symbol interference from said second base-band signal using a dual equalizer arrangement;

decoding said second base-band signal subsequent to said noise filtering and said channel inter-symbol interference canceling to a representative bit stream.

Claim ~~14.~~ 4 (original) The method of Claim ~~13~~ 3, wherein said analog front end device further filters said first pass-band signal to comply with HomePNA mask requirements about a 2 MHz frequency region.

Claim ~~15.~~ 5 (original) The method of Claim ~~13~~ 3, wherein said received HomePNA data signal is converted from an analog signal to a digital signal for further processing in said receiver path.

Claim ~~16.~~ 6 (original) The method of Claim ~~13~~ 3, wherein said transmitter path and said receiver path are integrated in an application specific circuit.

Claim ~~17.~~ 7 (original) The method of Claim ~~13~~ 3, wherein said dual equalizer arrangement operates to receive a payload portion of said HomePNA data signal at a first and second rate.

Claim ~~18.~~ 8 (original) The method of Claim ~~17~~ 7, wherein said first rate and said second rate comprise 2 Mbaud and 4 Mbaud, respectively, wherein said operating rate is defined in a pay-load encoding field of said received HomePNA data signal.

Claim ~~19.~~ 9 (original) The method of Claim ~~17~~ 7, wherein equalizers of said dual equalizer arrangement are trained to receive a pay-load portion of said HomePNA data signal at said first or said second operating rate prior to receiving said pay-load portion, wherein each equalizer can operate at said first or said second operating rate.

Claim ~~20.~~ 10 (original) The method of Claim ~~13~~ 3 further including determining a cross correlation function of said received HomePNA data signal and a predetermined training symbol.

Claim ~~21.~~ 11 (original) The method of Claim ~~13~~ 3 further including, in said receiver path, canceling an echo signal associated with a transmitted signal from said transmitter path.

Claim ~~22.~~ 12 (original) The method of Claim ~~13~~ 3 further including, in said receiver path, detecting a collision between a transmitted signal associated with said transmitter path and other transmitted signals on said shared medium.

Claim ~~23.~~ 13 (original) The method of Claim ~~22,~~ 12 wherein said collision detection further includes comparing a determined echo signal and said other transmitted signals on said shared medium.